



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

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STATEMENT OF LEGAL AND FACTUAL BASIS

Eastman Chemical Company
Courtland, Virginia
Permit No. TRO-61433

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Eastman Chemical Company has applied for a Title V Operating Permit for its facility in Courtland, Southampton County. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____
Yen T Bao
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Date: _____

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Date: _____

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Date: _____

I. FACILITY INFORMATION

Permittee

Eastman Chemical Company
P.O. Box 511
Kingsport, TN 37662

Facility

Eastman Chemical Resins Incorporated, Franklin, VA
27123 Shady Brook Trail
Courtland, VA 23837-2034

County-Plant Identification Number: 51-175-00057

A. SOURCE DESCRIPTION

NAICS Code: 325191- Gum and Wood Chemical Manufacturing

The manufacturing process at the facility is the Pamolyn process with a design capacity of 40 million lbs products/year. Crystallization procedure produces saturated fatty acids, oleic acids and linoleic acids from tall oil fatty acids purchased from external suppliers. Additional products are produced by the conjugation procedure. The process is a continuous process that operates 24 hours per day, 365 days per year. The solvent used for the crystallization process is acetone which is not a VOC by definition. Fatty acids also have low vapor pressure. Nevertheless, the main criteria pollutant emitted from the facility is VOC which is mostly uncontrolled and emitted directly to the atmosphere or via conservation vents and seal pots. Fugitive emissions from equipment leaks are estimated to be the most significant part of the VOC emissions.

Facility operates a wastewater treatment plant with a biological treatment system to treat wastewater from the manufacturing process and surface runoff. The treated wastewater (0.15 million gallons/day maximum on an annual average) and non-contact cooling water (approximately 7 million gallons/day) are discharged to the neighboring Ashland Hercules Water Technologies' permitted outfall.

Refrigeration for the crystallization is provided by an ammonia based refrigeration system. Ammonia usage is below the threshold level for Section 112(r) of the clean air act.

Heat for the conjugation step is provided by an electric vaporizer which uses Xceltherm MK1 or equivalent as the heat exchanger fluid. Fugitive emissions from this system are a source of biphenyl (a VOC HAP) emissions.

The facility has a State Operating Permit (SOP) dated October 18, 2010 with a facility-wide VOC emission limit of 18.8 tons/year and 0.6 tons/yr total HAPs including 0.5 tons/yr biphenyl. No other criteria pollutants are emitted in significant amounts.

Facility has confidential information on file but not in this Title V permit application.

This source is located in an attainment area for all criteria pollutants.

Prior to 2001, the Pamolyn process and the wastewater treatment plant were part of the Hercules Incorporated's facility at the same location. All equipment were included in Hercules initial Title V permit application in 1998, hence, they

are covered under the permit shield. Hercules sold those processes as well as the Tall Oil process to Eastman Chemical Resins, Inc. (Eastman), and the Vulcup® process to GEO Specialty Chemicals (GEO), retaining only the Aquapel® process and parts of the Wastewater Treatment process that are necessary for the Aquapel® process. All three facilities, Hercules, Eastman, and GEO contend that they are separate independent entities. Eastman's own Title V permit application was initially received on 10/01/2001. However, EPA made a determination in a letter dated 5/13/2004 that the three facilities are under common control based on various factors. Hercules has an enforceable VOC emission cap of 92.9 tons/yr but Eastman and GEO had no enforceable VOC emission caps, hence the three-facility combination would be major for VOC under both the Title V and the PSD regulations. Since then, Hercules has become Ashland Hercules Water Technologies (Ashland), and GEO has been sold to Arkema Inc. (Arkema). Furthermore, the Tall Oil process at Eastman has been eliminated. That process produced fatty acid grades that potentially could be used as feed for Ashland. Therefore, through Virginia DEQ, Eastman initiated an appeal to the 5/13/04 EPA decision. On November 19, 2009, EPA Region III reaffirmed "that there is sufficient common control among Ashland, Eastman, and Arkema for Ashland, Eastman, and Arkema to be one stationary source under the Clean Air Act." As such, the three facilities (Ashland, Eastman, and Arkema) comprise one single Title V/ PSD major source. Eastman did not pursue the appeal any further. However, currently, Arkema is pursuing its own appeal to EPA that it is not under common control with the other two facilities. Response from EPA is pending.

Virginia DEQ decided in 2001 that each facility would be issued its own Title V permit. Both Hercules (now Ashland) and GEO (now Arkema) received their Title V permits soon afterwards while Eastman was waiting for EPA decision to see if it could operate as a separate synthetic minor source under a State Operating Permit. After the EPA 2009 decision, Eastman still wanted to obtain an SOP permit and accepted a VOC emission cap of 18.8 tons/yr with the knowledge that it still has to obtain a Title V permit as part of a three-plant stationary source under common control. Note that as the Tall Oil process was eliminated, the fuel oil-fired vaporizers were also removed and their 6/25/03 permit was rescinded on 7/03/08; there is no other fuel burning equipment at Eastman. DEQ is mindful that the three separate permits are considered parts of a single Title V permit and may decide to combine them into one document in the future.

II. COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

III. EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Two letters are used to identify each process: PM for Pamolyn process, and WW for Wastewater treatment process. A third letter “E” denotes emission from the process. The next two numbers are consecutive numbers used to indicate a group of units with common function. For example PME01 represents the emission group in the first step (step 01) of the Pamolyn process. Note that all process equipment are as listed in the 10/18/10 SOP. However, most process tanks and storage tanks qualify as insignificant activities pursuant to 9 VAC 5-80-720 B; hence they are listed under the Insignificant Activities Section VI of the permit. There are no pollution control devices. PME01, PME02 and PME04 have common headers while PME07 has its own stacks/vents.

Equipment to be operated consists of:

Emission Group ID	Stack ID	Emission Group Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
PAMOLYN PROCESS, 1969, 40 million lbs products/year							
PME01	Common headers: P102/P104/P105/ P106/P108 and S110/S111 / S112	Saturated fatty acid crystallization with process tanks and vacuum filter system, 1969	40 million lbs/year	-	-	-	10/18/10 SOP
PME02		Crude oleic crystallization with process tanks and vacuum filter system, 1969	40 million lbs/year	-	-	-	10/18/10 SOP
PME04		Pure oleic crystallization with process tanks and vacuum filter system, 1969	40 million lbs/year	-	-	-	10/18/10 SOP
PME06	-	Conjugation Reactors with heated units (unvented), 1969	9.8 million lbs/year	-	-	-	10/18/10 SOP
PME07	R-201-R WFE	Acidulator and Wiped Film Evaporator, 1969 Acidulator Wiped Film Evaporator	9.8 million lbs/year 40 million lbs/year	-	-	-	10/18/10 SOP
PME09	-	Reactant and product storage tanks with various contents and installation dates.	Tank details are listed under insignificant activities	-	-	-	10/18/10 SOP

Emission Group ID	Stack ID	Emission Group Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
	-	Loading racks: Two (2) truck loading racks, twelve (12) rail loading racks, and one (1) drum filling station.	12,000 gal/hr combined estimate	-	-	-	10/18/10 SOP
Wastewater Treatment Process, 1953-2003, 7.0 million gallons/day (including non-contact cooling water)							
WWE00	-	Wastewater biological treatment system and oil separation unit, 1953-2003	0.15 million gallons/day	-	-	-	10/18/10 SOP

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

IV. EMISSIONS INVENTORY

A copy of the 2010 annual emission update is attached. Emissions are summarized in the following tables.

2010 Actual Emissions

Emission Unit	2010 Criteria Pollutant Emission in Tons/Year				
	VOC*	CO	SO ₂	PM ₁₀	NO _x
Pamolyn Process	15.77				
Wastewater Treatment Process	1.22				
Total	16.99				

*Includes VOC HAP

V. PAMOLYN PROCESS REQUIREMENTS- (Emission Groups ID# PME01, PME02, PME04, and PME06 through PME09)

A. Limitations

Production and emission limits are taken from the 10/18/2010 SOP. The emission limits are the same as the maximum potential to emit estimated for the process as shown in the facility's SOP submittal dated 7/01/10 and summarized in the table below.

Equipment	Pamolyn Point sources	Equipment leak fugitives**	Tanks	Loading racks	Total	Biphenyl
VOC Emissions (Tons/year)	1.05	14.87	<0.01	<0.01	15.9	0.5

** Including biphenyl

The crystallization process (PME01, PME02 and PME04) has two vent systems: the vacuum filter vent system and the stripper and acetone still vent system. The conjugation process has two vents (the acidulator and the wiped film evaporator vents R-201-R and WFE, respectively). All four point sources of VOC emissions were quantified by the facility via emission testing, and the results were annualized at 8760 hours/year with allowance for process variability. The total point emissions were 1.05 tons/year.

The potential equipment leak fugitive emissions were estimated by the use of SOCM emission factors from EPA document EPA-453/R-95-017 Table 2-1, the Texas Commission on Environmental Quality (TCEQ) document entitled "Air Permit Technical Guidance for Chemical Sources: Equipment leak Fugitives" page 49 of 55, and the Chemical Manufacturers Association document entitled "Improving Air Quality: Guidance for estimating Fugitive Emissions from Equipment", Table on page 24. Total estimated fugitive emissions from equipment leaks were 14.87 tons/year. This amount includes 0.5 tons/year biphenyl from the heat exchanger fluid Xceltherm MK1 used in the electric vaporizer that provides heat for the conjugation process.

Loading and unloading emissions were estimated by procedures in AP-42, section 5.2, and tanks emissions were estimated by procedures in AP-42, section 7.1. Those results were insignificant (<0.01 tons/yr) due to the low vapor pressure of fatty acids.

There are no sources of other criteria pollutants or visible emissions.

B. Monitoring and Recordkeeping

CAM does not apply because there is no emission control device.

Annual production of fatty acids is calculated monthly as the sum of each consecutive 12-month period while emissions are calculated annually. This is deemed acceptable as requested by the facility because the emission limits are based on 8760 hrs/yr operation, hence, they are not likely to be exceeded. Moreover, equipment leak fugitive emissions from the Pamolyn process, the main contributor to the total VOC emissions, are calculated using EPA emission factors, hence, would not vary much from month to month. Records are kept to demonstrate compliance with the annual limits.

C. Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

D. Streamlined Requirements

There are no streamlined requirements.

VI. WASTEWATER TREATMENT PROCESS REQUIREMENTS- (Emission Group ID# WWE00)

A. Limitations

The wastewater throughput and emission limits are taken from the 10/18/2010 SOP. The emission limits are the potential wastewater treatment plant emissions as estimated by the TOXCHEM program for all identified emission sources of the plant such as tall oil area drains and rain water, conjugation neutralization, crude tall oil manhole, wet well, force main, oil/water separator, equalization, wastewater temperature change, activated sludge.... Based on wastewater sampling and analysis results, the annualized potential to emit was 2.9 tons/year VOC emissions, including total HAPs at <0.01 tons/year such as benzene, methanol, methyl isobutyl ketone, phenol, styrene, hexane, and toluene.

There are no sources of other criteria pollutants or visible emissions.

B. Monitoring and Recordkeeping

CAM does not apply because there is no emission control device.

Emissions are calculated annually. This is deemed acceptable as the annual emission limits are the potential to emit, hence, they are not likely to be exceeded. Additionally, annual wastewater flow at each of the crystallization section, conjugation section, and the wiped film evaporator section is tracked monthly as the sum of each consecutive 12-month

period to demonstrate compliance with the wastewater throughput limit. Records are kept to demonstrate compliance with the annual limits.

C. Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

D. Streamlined Requirements

There are no streamlined requirements.

VII. FACILITY WIDE REQUIREMENTS

A. Limitations

VOC work practice standards Condition 3 of 10/18/10 SOP was originated from 9 VAC 5-50-20 F with minor changes to allow the facility to handle drips from some older rotating equipment that tends to weep but the weepage is the virtually non-volatile fatty acids.

The facility-wide emission limits are the sum of all point and fugitive emissions. The total HAP limit of 0.6 tons/yr is based on the knowledge of 0.5 tons/year biphenyl potential to emit discussed above and allowing 0.1 tons/year for all other HAPs that were determined to be in insignificant amounts. The limits confirm that Eastman, by itself, is a minor source of criteria pollutant emissions as well as HAPs.

General Condition 13 of the 10/18/2010 SOP on Violation of Ambient Air Quality Standards has no equivalent in the General Conditions section of the Title V permit, hence, it is included in this section as Condition V.A.3.

Equipment	Pamolyn Point sources	Equipment leak fugitives**	Tanks	Loading racks	Wastewater Treatment Plant*	Total VOC Emissions	Total HAPS
VOC Emissions (Tons/year)	1.05	14.87	<0.01	<0.01	2.89	18.81	0.6

*Including HAPs at <0.01 tons/year such as benzene, methanol, methyl isobutyl ketone, phenol, styrene, hexane, and toluene

** Including biphenyl at 0.5 tons/year

B. Monitoring and Recordkeeping

Recordkeeping is required for Material Safety Data Sheets (MSDS), Certified Product Data Sheets (CPDS), or other vendor information as approved by DEQ showing VOC content and hazardous air pollutants (HAP) content for each heat transfer fluid or other VOC containing liquids used at the facility to ensure that HAP emissions are below the limit.

C. Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

D. Streamlined Requirements

There are no streamlined requirements other than most of the general conditions in the 10/18/10 SOP permit which are covered under General Conditions of the Title V permit.

VIII. GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

1. Comments on General Conditions

a. Condition B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-09”.

This general condition cites the Article that follows:

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

b. Condition F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

In order for emission units to be relieved from the requirement to make a written report in 14 days the emission units must have continuous monitors meeting the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

c. Condition J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits

9 VAC 5-80-260. Enforcement

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

d. Condition U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

9 VAC 5-80-110. Permit Content

e. Condition Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

IX. STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

State standards on odorous emissions (9 VAC 5-40-130 et seq. and 9 VAC 5-50-130 et seq.); and

State rules on toxic pollutants (9 VAC 5-60-200 et seq. and 9 VAC 5-60-300 et seq.). Note that the facility is not subject to any NESHAP as discussed in Section XI.

X. FUTURE APPLICABLE REQUIREMENTS

It is not anticipated that the facility is subject to any future applicable requirements unless new processes or new equipment are added. It appears that the result of Arkema's ongoing appeal of EPA's determination that it is under common control with Eastman and Ashland would not, by itself, have any immediate effect. As an independent facility, Eastman would become an area source of hazardous air pollutants. However, the two potentially applicable area source MACTs, Subpart VVVVVV- National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources and Subpart BBBBBBBB- National Emission Standards for Hazardous Air Pollutants for Area Sources: Chemical Preparations Industry, do not apply according to their applicability criteria.

XI. INAPPLICABLE REQUIREMENTS

The following requirements have been specifically identified as being not applicable to this permitted facility; the basis for each inapplicability is also provided in addition to the information in the table in the permit.

Citation	Title of Citation	Description of Applicability- Basis for Inapplicability
9 VAC 5-40-300	Standards for VOCs for General Process Operations.	Facilities located in a VOC control area (9 VAC 5-20-206)- Southampton county is not on the list of VOC control area..
9 VAC 5-40-3410 et seq. (Rule 4-25)	Emission Standards For Volatile Organic Compound Storage and Transfer Operations.	Facilities located in a VOC control area (9 VAC 5-20-206)- Southampton county is not on the list of VOC control areas.
40 CFR 60 Subpart D, Da, Db, and Dc	NSPS for Boilers and Electric Generating Units	Fuel combustion sources meeting the definitions of affected units under those standards- Facility does not have those units.
NSPS Subpart K and Ka	NSPS for Storage Vessels for Petroleum Liquids	Petroleum Storage Vessels constructed, reconstructed, or modified during certain date ranges as specified in the standards- Facility has no petroleum storage vessels in service.
NSPS Subpart Kb	NSPS for Storage Vessels for Volatile Organic Liquid Storage Vessels	Volatile Organic Liquid Storage Vessels constructed, reconstructed, or modified after July 23, 1984- Even though some tanks are larger than 20,000-gal size and installed after July 23, 1984, VOL materials stored by the facility have vapor pressure below the thresholds for applicability.
NSPS Subpart O	NSPS for Sewage Treatment Plants	Incinerators that combust wastes containing Municipal Sewage Sludge- Facility's wastewater treatment plant does not treat sewage.
NSPS Subpart VV and VVa	NSPS for equipment leaks of VOC in the SOCMCI	Facilities that produces as intermediates or final products chemicals listed in 40 CFR 60.489- Facility does not produce any of the listed chemicals.
40 CFR 60 Subpart III	NSPS for VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOMCI) Air Oxidation Unit Processes.	SOCMI emission units that meet the definition of "air oxidation process" in 40 CFR 60.611- Facility's processes do not meet the definition.
40 CFR 60 Subpart NNN	NSPS for VOC Emissions from SOCMCI Distillation Operations.	SOCMI distillation processes that was in existence on December 20, 1983, and produces chemicals listed in 40 CFR 60.667- Facility does not produce any of the listed chemicals.

Citation	Title of Citation	Description of Applicability- Basis for Inapplicability
40 CFR 60 Subpart RRR	NSPS for VOC Emissions from SOCMi Reactor Processes.	SOCMI reactor processes that produce chemicals listed in 40 CFR 60.707- Facility does not produce any of the listed chemicals.
40 CFR 60 Subpart YYY (proposed)	NSPS for VOC emissions from Wastewater Operation at SOCMi facilities.	Facilities that produce SOCMi chemicals- Facility does not produce any SOCMi chemicals.
40 CFR 60 Subparts IIII and JJJJ	NSPS for Stationary Compression Ignition Internal Combustion Engines and Stationary Spark Ignition Internal Combustion Engines, respectively.	Stationary Internal Combustion Engines- Facility has no stationary internal combustion engines.
40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks	Equipment in Volatile Hazardous Air Pollutant (VHAP) Services; benzene and vinyl chloride are VHAP by definition in the Subpart- The facility's processes are not in benzene service.
40 CFR 61 Subpart Y	National Emission Standards for Benzene Emissions from Benzene Storage Vessels	Storage vessels that store benzene- The facility does not store benzene.
40 CFR 61 Subpart BB	National Emission Standards for Benzene Emissions from Benzene Transfer Operations	Loading racks that handle benzene- Facility does not load liquids containing benzene as defined in 40 CFR 61.300(a).
40 CFR 63 Subparts F, G, H, and I	Hazardous Organic NESHAP (HON) MACT.	SOCMI major HAP sources that meet the criteria of 40 CFR 63.100 (b)(1) to (3)- Facility does not produce listed chemicals.
40 CFR 63 Subpart Q	Cooling Tower MACT.	Facilities that had previously used chromium-based water treatment chemicals in the cooling towers- Facility has never used chromium-based water treatment chemicals in its cooling towers.
40 CFR 63 Subpart T	National Emission Standards for Halogenated Solvent Cleaning	Cleaning machines using certain halogenated solvents- Facility does not have halogenated solvent cleaning units.
40 CFR 63 Subpart DD	NESHAP for Off-Site Waste and Recovery Operations	Major HAP sources that receive wastes from off-site- Facility does not receive wastes from off-site.
40 CFR 63 Subpart EEE	NESHAP for Hazardous Waste Combustors	Hazardous waste combustors at any major or area HAP sources- Facility does not operate a hazardous waste combustor.
40 CFR 63 Subpart EEEE	NESHAP for Organic Liquids Distribution (Non-Gasoline)	HAP emissions from Organic Liquid Distribution Operation (non-gasoline) at major HAP sources- Facility does not store or distribute HAP containing organic liquids as regulated under this subpart.
40 CFR 63 Subpart FFFF	NESHAP for Miscellaneous Organic Chemical Manufacturing	Chemical Manufacturing Process Units at major HAP sources that process, use, or produce HAPs- Facility does not process, use,

Citation	Title of Citation	Description of Applicability- Basis for Inapplicability
		or produce any HAP except that the plant has an estimated 0.5 tons/yr fugitive emissions of biphenyl, a VOC HAP, from the heat transfer fluid used in an electric vaporizer used to provide process heat. Heat transfer fluid falls under definition of ancillary activities (40 CFR 63.2550) which are not considered part of the MCPU (see EPA e-mail 4/27/10). Hence, the facility is not subject to this subpart (40 CFR 63.2435(b)).
40 CFR 63 Subpart ZZZZ	National Emission Standards For Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)	RICE at major HAP sources- Facility does not have or operate any stationary RICE.
40 CFR 63 Subpart DDDDD	NESHAP for Industrial, Commercial and Institutional Boilers and Process Heaters	Industrial, Commercial and Institutional Boilers and Process Heaters at major HAP sources- Facility does not have any boilers or process heaters.
40 CFR 63 Subpart GGGGG	National Emission Standards For Hazardous Air Pollutants: Site Remediation	HAP emissions from remediation activities at major HAP sources- Facility does not have any ongoing remediation activities.
40 CFR 64	CAM rule	Units with emission control device and potential uncontrolled emissions above certain thresholds- Facility's point emission sources do not have control device.
40 CFR 68	Chemical Accident Prevention Provisions	Facilities that store or use chemicals in quantities greater than the thresholds defined in the rule- Facility does not store or use chemicals subject to the provisions in quantities greater than the thresholds defined therein.

Additionally, there are no applicable GHG permitting requirements as the three facilities combined are not a major source of GHG. The potential GHG emissions are from Ashland's two permitted but not-yet constructed boilers, 40 million BTU/hr each, using natural gas with distillate oil as back-up fuel. The calculated PTE were 49,226.4 tons/year CO₂ equivalent.

XII. INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
PME01/ P104	Process tank, fatty acid, 1969, 10,000 gal	9 VAC 5-80-720 B	VOC	
PME02/ P105	Process tank, fatty acid, 1969, 10,000 gal	9 VAC 5-80-720 B	VOC	
P106	Process tank, crude oleic, 1969, 5,300 gal	9 VAC 5-80-720 B	VOC	
PME04/ P102	Process tank, fatty acid, 1969, 5,300 gal	9 VAC 5-80-720 B	VOC	
P108	Process tank, fatty acid, 1969, 5,300 gal	9 VAC 5-80-720 B	VOC	
T119	Fatty acid/acetone, 1969, 5,000 gal	9 VAC 5-80-720 B	VOC	
PME07/ R-201-R	Process tank, fatty acid, 1969, 1,000 gal	9 VAC 5-80-720 B	VOC	
T208	Fatty Acid/ NaSO ₄ solution, 1969, 1,000 gal	9 VAC 5-80-720 B	VOC	
T213	Fatty acid, 1969, 150 gal	9 VAC 5-80-720 B	VOC	
T213-1	Fatty acid, 1969, 1,000 gal	9 VAC 5-80-720 B	VOC	
T69	Fatty acid, 1969, 270 gal	9 VAC 5-80-720 B	VOC	
Cottonseed oil vat	Cotton seed oil , 100 gal	9 VAC 5-80-720 B	VOC	
PME08/ T210	Heat transfer fluid (no HAP), 84 gal	9 VAC 5-80-720 B	VOC	
T214	Heat transfer fluid (containing biphenyl), 470 gal	9 VAC 5-80-720 B	VOC, HAP	
PME09/ P101	Fatty acid, 1969, 15,000 gal	9 VAC 5-80-720 B	VOC	
P115	Fatty acid, 1969, 5,300 gal	9 VAC 5-80-720 B	VOC	
P118	Fatty acid, 1969, 15,220 gal	9 VAC 5-80-720 B	VOC	
P116A	Fatty acid, 1969, 5,300 gal	9 VAC 5-80-720 B	VOC	

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
P116B	Fatty acid, 1969, 5,300 gal	9 VAC 5-80-720 B	VOC	
P303	Fatty acid, 1969, 4,900 gal	9 VAC 5-80-720 B	VOC	
P641	Fatty acid, 1969, 4,900 gal	9 VAC 5-80-720 B	VOC	
P642	Fatty acid, 1969, 4,900 gal	9 VAC 5-80-720 B	VOC	
T31	Fatty acid, pre 7/23/1984, 48,000 gal	9 VAC 5-80-720 B	VOC	
T32	Fatty acid, pre 7/23/1984, 48,000 gal	9 VAC 5-80-720 B	VOC	
T33	Fatty acid, pre 7/23/1984, 48,000 gal	9 VAC 5-80-720 B	VOC	
T34	Fatty acid, pre 7/23/1984, 48,000 gal	9 VAC 5-80-720 B	VOC	
T35	Fatty acid, pre 7/23/1984, 48,000 gal	9 VAC 5-80-720 B	VOC	
T36	Fatty acid, pre 7/23/1984, 48,000 gal	9 VAC 5-80-720 B	VOC	
T37	Fatty acid, pre 7/23/1984, 9,100 gal	9 VAC 5-80-720 B	VOC	
T38	Fatty acid, pre 7/23/1984, 11,200 gal	9 VAC 5-80-720 B	VOC	
T451	Fatty acid, 2003, 275,000 gal	9 VAC 5-80-720 B	VOC	
T452	Fatty acid, 2003, 110,000 gal	9 VAC 5-80-720 B	VOC	
P39	Fatty acid, 1967, 16,300 gal	9 VAC 5-80-720 B	VOC	
P40	Fatty acid, 1967, 26,300 gal	9 VAC 5-80-720 B	VOC	
P117-1	Fatty acid, 1969, 5,300 gal	9 VAC 5-80-720 B	VOC	
P117-2	Fatty acid, 1969, 5,300 gal	9 VAC 5-80-720 B	VOC	
P202	Fatty acid, 1969, 9,800 gal	9 VAC 5-80-720 B	VOC	
P409	Fatty acid, 1974, 10,000 gal	9 VAC 5-80-720 B	VOC	
P406	Fatty acid, 1974, 24,000 gal	9 VAC 5-80-720 B	VOC	
P206	Fatty acid, 1969, 9,980 gal	9 VAC 5-80-720 B	VOC	
P216	Fatty acid, 1971, 8,880 gal	9 VAC 5-80-720 B	VOC	
P205	Fatty acid, 1999, 1,600 gal	9 VAC 5-80-720 B	VOC	
P401	Fatty acid, 1969, 9,800 gal	9 VAC 5-80-720 B	VOC	
P402	Fatty acid, 1969, 49,000 gal	9 VAC 5-80-720 B	VOC	

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
P403	Fatty acid, 1969, 49,000 gal	9 VAC 5-80-720 B	VOC	
P405	Fatty acid, 1974, 24,000 gal	9 VAC 5-80-720 B	VOC	
P407	Fatty acid, 1974, 24,000 gal	9 VAC 5-80-720 B	VOC	
P408	Fatty acid, 1974, 24,000 gal	9 VAC 5-80-720 B	VOC	
P410	Fatty acid, 1974, 24,000 gal	9 VAC 5-80-720 B	VOC	
P411	Fatty acid, 1974, 24,000 gal	9 VAC 5-80-720 B	VOC	
P412	Fatty acid, 1974, 24,000 gal	9 VAC 5-80-720 B	VOC	
P413	Fatty acid, 1974, 24,000 gal	9 VAC 5-80-720 B	VOC	
P416	Fatty acid, 1963, 9,240 gal	9 VAC 5-80-720 B	VOC	
P417	Fatty acid, 2003, 9,520 gal	9 VAC 5-80-720 B	VOC	
P415	Fatty acid, 1968, 15,800 gal	9 VAC 5-80-720 B	VOC	
P3	Fatty acid, 2003, 50,000 gal	9 VAC 5-80-720 B	VOC	
T610	Fatty Acid/Oil Collection, 12,000 gal	9 VAC 5-80-720 B	VOC	
T204	Fatty Acid/ NaSO ₄ solution, 1969, replaced 2005, 10,000 gal	9 VAC 5-80-720 B	VOC	
WWE01	Wastewater Treatment Process, car wash pit, 1956, replaced 2011 (exemption letter dated 9/16/10), 45,000 gal	9 VAC 5-80-720 B	VOC	
WWE02/ T602	Wet Well Collection Sump, 1956, 1,950 gal	9 VAC 5-80-720 B	VOC	
WWE04/ T604	Skimmed Oil Tank, 1989 (Tank T610 in PME09 is secondary), 1,000 gal	9 VAC 5-80-720 B	VOC	
WWE05/ S-100	Oil-Water Separator, 1995, 930 gal	9 VAC 5-80-720 B	VOC	
T-603	Wastewater Holding tank, 1989, 2260 gal	9 VAC 5-80-720 B	VOC	
WWE06/ T605	Storm Water Holding Tank, 1994, 620,000 gal	9 VAC 5-80-720 B	VOC	
WWE07/ T601	Equalization Tank, 1996, 250,000 gal	9 VAC 5-80-720 B	VOC	

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
WWE07A/ T606	Mix Tank, 1996, 5,000 gal	9 VAC 5-80-720 B	VOC	
WWE08/ T608	Aeration Basin/Clarifier, 2003, 214,000 gal/36,000 gal	9 VAC 5-80-720 B	VOC	
WWE09/ T607	Sludge Holding Tank, prior to 1980, relocated 1996, 17,000 gal	9 VAC 5-80-720 B	VOC	
T609	Filtrate Sump, 2003, 350 gal	9 VAC 5-80-720 B	VOC	
BP-607-1	Belt Filter Press, 2003	9 VAC 5-80-720 B	VOC	
WWE10/ "Frac" Tanks	Treated wastewater temporary storage tanks, up to 20,000 gal	9 VAC 5-80-720 B	VOC	
T50	Emergency wastewater storage, 1958, 210,000 gal	9 VAC 5-80-720 B	VOC	
T51	Emergency wastewater storage, 1958, 210,000 gal	9 VAC 5-80-720 B	VOC	
T53	Emergency wastewater storage, 1958, 403,000 gal	9 VAC 5-80-720 B	VOC	
T54	Emergency wastewater storage, 2003, 589,000 gal	9 VAC 5-80-720 B	VOC	
T450	Emergency wastewater storage, 2003, 243,000 gal	9 VAC 5-80-720 B	VOC	
Non-VOC Tanks/ T200	Caustic soda storage, 1969, 5,000 gal	9 VAC 5-80-720 A	N/A	
T400	Caustic soda storage, 1969, 10,750 gal	9 VAC 5-80-720 A	N/A	
T203	Sulfuric acid storage, 1969, 20,000 gal	9 VAC 5-80-720 A	N/A	
T103	Dry acetone storage, 1969, 2,000 gal	9 VAC 5-80-720 A	N/A	
T404	Dry acetone storage, 1969, 13,500 gal	9 VAC 5-80-720 A	N/A	
T404A	Dry acetone storage, 1973, 24,000 gal	9 VAC 5-80-720 A	N/A	
T302	Dry acetone storage, 1969, 2,250 gal	9 VAC 5-80-720 A	N/A	
Ammonia-based Refrigeration System	Approximately 300 lbs/yr consumption of NH ₃	9 VAC 5-80-720B	Ammonia	
Carbon Dioxide-based Refrigeration System	Approximately 20 tons/yr CO ₂ loss	9 VAC 5-80-720 A	N/A	

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

Note that most process tanks or storage tanks at the facility handle fatty acids that have very low volatility. Hence, their potential VOC emissions are below 5 tons/yr, qualifying as insignificant activities pursuant to 9 VAC 5-80-720-B 2. The heat transfer fluid tank (PME08/T214) has potential HAP emissions at 0.5 tons/yr, hence they are insignificant activities pursuant to 9 VAC 5-80-720-B 5.

Storage tanks of aqueous solutions or acetone do not emit VOC, hence they are insignificant activities pursuant to 9 VAC 5-80-720 A.42. The same applies to carbon dioxide-based refrigeration system.

The ammonia-based refrigeration system has potential emissions below the threshold quantities for Accidental Release Prevention (10,000 lbs anhydrous ammonia or 20,000 lbs of solutions with $\geq 20\%$ ammonia concentration) in 40 CFR 68.130. Therefore, this is an insignificant activity pursuant to 9 VAC 5-80-720 B.6.

XIII. CONFIDENTIAL INFORMATION

The facility's former owner, Hercules Incorporated, submitted a list of proposed confidential business information dated February 3, 1998, and received on February 5, 1998. The DEQ concurred with the proposed list of information in a DEQ letter dated February 23, 1998. However, Eastman's current Title V permit application dated March 11, 2011, contains no confidential business information. The resulting Title V permit was also written to be self-explanatory but without any confidential business information so that it is suitable for public review.

XIV. PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in The Tidewater News from July 22, 2011 to August 22, 2011.